

What is claimed is:

1. A method of manufacturing a glass panel, the method comprising the steps of: disposing a number of spacers (2) between a pair of glass sheets (1A, 1B); sealing outer peripheries of the glass sheets (1A, 1B) with an outer periphery sealing portion (3) to form a gap (V) between the glass sheets (1A, 1B); forming a vent (4) in one (1A) of the glass sheets (1A, 1B) for evacuating gas from the gap (V); evacuating the gas in the gap (V) via the vent (4) to depressurize the gap (V); and then sealing the vent (4);
10 wherein at the sealing step of sealing the vent (4), a metal solder (6) is employed as a sealing material, a piece (6A) of the metal solder is heated and molten adjacent the vent (4) to break open an oxide skin (6a) on the surface of the metal solder (6), so that the metal solder (6) therein is allowed to flow out through the broken oxide skin to come into contact directly with
15 the one glass sheet (1A), whereby the metal solder (6) is cooled and solidified by the contact, thus sealing the vent (4).
2. The method of manufacturing a glass panel according to claim 1, wherein an inflow preventing member (5) is provided at a longitudinal
20 intermediate portion of the vent (4) for preventing the flown-out metal solder (6) from flowing into the gap (V).
3. The method of manufacturing a glass panel according to claim 2, wherein the inflow preventing member (5) includes a getter (5a) for
25 adsorbing the gas in the gap (V).
4. The method of manufacturing a glass panel according to any one of claims 1-3, wherein an annular restricting member (7) for restricting outflow of the metal solder (6) is provided so as to surround the vent (4) and
30 the metal solder piece (6A), and the metal solder (6) is allowed to flow out

through the oxide skin (6a) on the surface of the molten metal solder piece (6A) while the restricting member (7) is maintained in contact with the surface of the one glass sheet (1A).

5 5. The method of manufacturing a glass panel according to any one of claims 1-4, wherein the metal solder (6) comprises indium or an alloy including indium.

10 6. A glass panel including a pair of glass sheets (1A, 1B) disposed with a number of spacers (2) therebetween, outer peripheries of the glass sheets (1A, 1B) being sealed with an outer periphery sealing portion (3) to form a gap (V) between the glass sheets (1A, 1B), a vent (4) being formed in one (1A) of the glass sheets (1A, 1B) for evacuating gas from the gap (V) to depressurize the gap (V) and then being sealed;

15 wherein the vent (4) is sealed by the metal solder (6) with the metal solder (6) being introduced into the vent (4).

20 7. The glass panel according to claim 6, wherein an inflow preventing member (5) is provided at a longitudinal intermediate portion of the vent (4) for preventing the flown-out metal solder (6) from flowing into the gap (V), with the metal solder (6) being introduced up to the inflow preventing member (5).

25 8. The glass panel according to claim 7, wherein the inflow preventing member (5) includes a getter (5a) for adsorbing the gas in the gap (V).

9. The glass panel according to any one of claims 6-8, wherein the metal solder (6) comprises indium or an alloy including indium.

30 10. A method of manufacturing a glass panel, the method comprising

the steps of: disposing a number of spacers (2) between a pair of glass sheets (1A, 1B); sealing outer peripheries of the glass sheets (1A, 1B) with an outer periphery sealing portion (3) to form a gap (V) between the glass sheets (1A, 1B); forming a vent (4) in one (1A) of the glass sheets (1A, 1B) for evacuating gas from the gap (V); evacuating the gas in the gap (V) via the vent (4) to depressurize the gap (V); and then sealing the vent (4);

wherein at the sealing step of sealing the vent (4), a metal solder (6) is employed as a sealing material, a piece (6A) of the metal solder is heated and molten adjacent the vent (4) to break open an oxide skin (6a) on the surface of the metal solder (6), so that the metal solder (6) therein is allowed to flow out through the broken skin into the gap (V) to come into contact directly with a portion of the surface of the one glass sheet (1A) defining the vent (4) on the side of the gap (V), the portion being around the vent (4), and also with a portion of the surface of the other glass sheet (1B) on the side of the gap (V), whereby the metal solder (6) is cooled and solidified by the contact to block communication between the vent (4) and the gap (V), the portion being in the vicinity of the vent (4), thus sealing the vent (4).

11. The method of manufacturing a glass panel according to claim 10, wherein the portions of the glass sheets (1A, 1B) on the side of the gap (V) coming into direct contact with the metal solder (6) are formed in advance into smooth faces.

12. The method of manufacturing a glass panel according to claim 10 or 11, wherein the metal solder (6) comprises indium or an alloy including indium.

13. A glass panel including a pair of glass sheets (1A, 1B) disposed with a number of spacers (2) therebetween, outer peripheries of the glass sheets (1A, 1B) being sealed with an outer periphery sealing portion (3) to form a

gap (V) between the glass sheets (1A, 1B), a vent (4) being formed in one (1A) of the glass sheets (1A, 1B) for evacuating gas from the gap (V) to depressurize the gap (V) and then being sealed;

5 wherein a metal solder (6) is charged within the gap (V) in such a manner as to come into direct contact with a portion of the surface of the one glass sheet (1A) defining the vent (4) on the side of the gap (V), the portion being around the vent (4), and also with a portion of the surface of the other glass sheet (1B) on the side of the gap (V), the portion being in the vicinity the vent (4), thereby to block communication between the vent (4) and the gap (V), thus sealing the vent (4).

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14. The glass panel according to claim 13, wherein the metal solder (6) comprises indium or an alloy including indium.